

## Chiropractic and Osteopathic Manipulative Therapies for Pain

### Low Back Pain

The **2017 Clinical Guidelines of the American College of Physicians** for acute, subacute, and chronic low back pain recommend that clinicians and patients should select nonpharmacologic treatments as a first line of care, including spinal manipulation as one option.

Qaseem A, Wilt TJ, McLean RM, Forciea M, for the Clinical Guidelines Committee of the American College of P. Noninvasive treatments for acute, subacute, and chronic low back pain: A clinical practice guideline from the American College of Physicians. *Ann of Intern Med.* 2017.

Chou R, Deyo R, Friedly J, et al. Nonpharmacologic Therapies for Low Back Pain: A Systematic Review for an American College of Physicians Clinical Practice Guideline. *Ann Intern Med.* 2017.

A systematic review from 2016 showed nearly identical results to the above review: spinal manipulation was as effective as other active interventions for chronic low back pain. 3 RCTs (n=148) indicated that there was no difference between spinal manipulative therapy (SMT) and sham SMT at 1 month follow up. There was a small 1 month benefit in function for SMT, but not at longer term follow up. 6 RCTs showed a small improvement in pain at one month and 4 RCTs showed a small improvement in pain at 6 months.

Chou R, Deyo R, Friedly J, Skelly A, Hashimoto R, Weimer M, et al. Noninvasive Treatments for Low Back Pain Agency for Healthcare Research and Quality (US) (AHRQ) Comparative Effectiveness Reviews. 2016;Number 169(Report No.: 16-EHC004-EF).

### Neck Pain

A 2015 systematic review of spinal manipulation and mobilization for the treatment of neck pain concluded spinal manipulation and mobilization are similar in benefit for the treatment of neck pain (2 RCTs, n=446), but more effective than some medications for acute and subacute neck pain (1 RCT, n=182). There is moderate quality evidence of benefit for thoracic spinal manipulation in the treatment of acute and subacute neck pain (3 RCTs n=150).

Gross A, Langevin P, Burnie SJ, et al. Manipulation and mobilisation for neck pain contrasted against an inactive control or another active treatment. *The Cochrane Database of Syst Rev.* Sep 23 2015(9):CD004249.

### Lower Extremity

A 2016 systematic review found that manual therapy (MT) alone, or in combination with another treatment, improves self-reported function for knee osteoarthritis.

Salamh P, Cook C, Reiman MP, Sheets C. Treatment effectiveness and fidelity of manual therapy to the knee: A systematic review and meta-analysis. *Musculoskeletal care.* 2016.

A 2012 systematic review found ‘fair evidence’ that manipulative therapy (MT) can be helpful for hip osteoarthritis in the short term, and ‘limited evidence’ for the long term. The review also found limited to fair evidence that MT is helpful for knee osteoarthritis, patellofemoral pain syndrome, ankle inversion sprain and plantar fasciitis.

Brantingham JW, Bonnefin D, Perle SM, et al. Manipulative therapy for lower extremity conditions: update of a literature review. *J Manipulative Physiol Ther.* 2012;35(2):127-166.

## Upper Extremity, Headache and Temporomandibular Joint Disorders (TMJ)

A 2013 systematic review found fair evidence that manipulation therapy (MT) is effective when combined with exercise and/or multimodal therapy for lateral epicondylopathy and carpal tunnel syndrome and for TMJ.

Brantingham JW, Cassa TK, Bonnefin D, et al. Manipulative and multimodal therapy for upper extremity and temporomandibular disorders: a systematic review. *J Manipulative Physiol Ther.* 2013;36(3):143-201.

A 2011 systematic review found fair evidence to support MT for common shoulder related disorders (e.g. rotator cuff, adhesive capsulitis) including reduction of pain.

Brantingham JW, Cassa TK, Bonnefin D, et al. Manipulative and multimodal therapy for upper extremity and temporomandibular disorders: a systematic review. *J Manipulative Physiol Ther.* 2013;36(3):143-201.

A 2012 systematic review found some evidence to support spinal manipulative therapy (SMT) for cervicogenic headache.

Chaibi A, Russell MB. Manual therapies for cervicogenic headache: a systematic review. *J Headache Pain.* 2012;13(5):351-359.

A 2011 systematic review found that chiropractic spinal manipulative treatment (CSMT), among other non-pharmacological treatment, might be as effective as propranolol and topiramate for prophylactic migraine headache management.

Chaibi A, Tuchin PJ, Russell MB. Manual therapies for migraine: a systematic review. *J Headache Pain;* 2011;12(2):127-133.

## Cost-Effectiveness of SMT and MT

A 2016 systematic review by van der Velde et al. found for adults with whiplash-associated and neck pain associated disorders, nonpharmacologic therapies including manual therapy are cost-effective.

van der Velde G, Yu H, Paulden M, et al. Which interventions are cost-effective for the management of whiplash-associated and neck pain-associated disorders? A systematic review of the health economic literature by the Ontario Protocol for Traffic Injury Management (OPTIMA) Collaboration. *Spine J;* 2016;16(12):1582-1597

The 2014 systematic review by Tsertsvadze et al. found preliminary evidence that manual therapy (MT) may be more cost-effective than general practice (GP) care that also could have included exercise, stabilization and or advice about activity), for improving low back and shoulder pain.

Tsertsvadze A, Clar C, Court R, Clarke A, Mistry H, Sutcliffe P. Cost-effectiveness of manual therapy for the management of musculoskeletal conditions: a systematic review and narrative synthesis of evidence from randomized controlled trials. *J Manipulative Physiol Ther;*2014;37(6):343-362.